

**DESCRIPTIONS OF NEW SPECIES OF THE GENUS TERMATOPHYLIDEA
WITH A KEY TO THE KNOWN SPECIES**
(HEMIPTERA: MIRIDAE)

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ABSTRACT—Three new species of *Termatophylidea* Reuter and Poppius are described: **brunnea** from Puerto Rico, **hyalina** from Venezuela, and **constricta** from Venezuela. A key is provided for the identification of the seven known species.

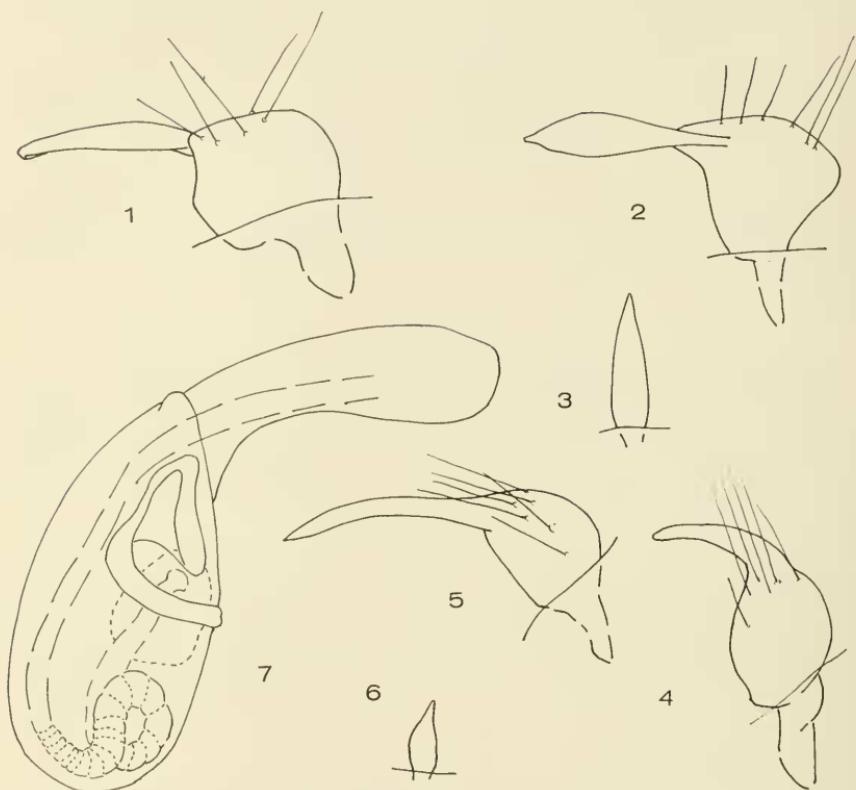
The deraeocorine genus *Termatophylidea* was described by Reuter and Poppius (1912) to include *T. pilosa* from Jamaica. Usinger (1935) and later Carvalho (1955) added a total of three additional species. In the present paper I describe three more species, two from northern Venezuela and one from Puerto Rico, and include a key to the known species of this neotropical genus.

The types are deposited in the U. S. National Museum and in my collection. In the descriptions that follow 10 micrometer units correspond to 0.38 mm. This paper is possible thanks to NSF Grant GB-7382.

I wish to thank Mr. Juan Pulido, from the central offices of the División de Malariología, at Maracay, Aragua, for his cooperation and assistance during my last collecting trip to that part of Venezuela. Prof. J. Moyá, from our College of Agriculture, at Mayagüez, made the habitus drawings.

***Termatophylidea brunnea*, n. sp.**
(Figs. 1-3)

Male—excepting membrane, covered with long fine brownish hairs arising from brownish spots. Head above and below shiny brown; eyes blackish; antennal segments brown, slightly lighter than head, first segment paler basally on inner side and reddish on the outside, first two with fine erect pilosity. Apical portion of head, in front of clypeal suture, reddish; beak shiny brownish, last segment paler. Thorax shiny brown, darker ventrally. Calli, transverse carina in front of calli, and a small median area behind calli with an inconspicuous yellowish tinge. Coxae shiny yellowish; femora yellowish basally, gradually very slightly darkening toward tip, a slightly darker anteapical band; tibiae and tarsi uniformly colored, pale yellowish brown, same shade as apical half of femora. Forewings hyaline; with translucent brownish areas as follows: at midlength and apex of clavus; corium with three contiguous areas on apical half, one closer to apex of clavus and two near cuneal margin; embolium before midlength and at apex; cuneus on inner and apical angles. Membrane mostly brownish, most of cell area and a roundish area on margin, just after cells, much lighter. Scutellum fuscous, a small inconspicuous yellowish spot on each basal angle. Abdomen ventrally broadly whitish on first four sterna, their lateral margins dark brown as are the remaining sterna and genital segment.



Figs. 1-3, *Termatophylidea brunnea*, n. sp., ♂: 1, left clasper, dorsal view; 2, left clasper, lateral view; 3, right clasper, lateral view. Figs. 4-7, *T. hyalina*, n. sp., ♂: 4, left clasper, dorsal view; 5, left clasper, lateral view; 6, right clasper, lateral view; 7, aedeagus, lateral view.

Head from apex to collar as long as wide across eyes (13:13); interocular space nearly as wide as eyes (4:4.5); from eye to collar one-third the length of eye (2:6). Antennal segments: 7, 15, 5, 6. Thorax: length 17, width 26.

Head pointed; vertex convex, without a V-shaped depression; eyes large, touching the narrow gula below. Collum short. Rostrum reaching to anterior coxae. Pronotum not strongly constricted; granular, granulations somewhat inconspicuous or ill-defined. Collar longer than distance from collar to eye (3:2); calli inconspicuous, smooth, divided by a shallow furrow before lateral margin of pronotum, separated from collar by a transverse slightly curved or concave carina, separated from each other by a shallow depression; a median narrow carina from behind calli not reaching hind margin. Lateral margin very shallowly concave; hind margin very shallowly biconcave. Mesoscutum very short; scutellum slightly wider than long (13:10), slightly convex and finely transversely rugose, slightly inflated before sharp apex. Hemielytra with claval area internally to claval vein raised, uniformly pilose, clavo-coral suture with sparser pilosity; embolium at

mid-length about as wide as collar (2.8:3), slightly wider apically than basally (3.1:2), without tubercle at apex; cuneus slightly longer than wide at base (10:8). Overall length 3.0 mm.

Male genitalia as in figs. 1 to 3; left clasper flattened apically, somewhat foliaceous.

Holotype, male, from El Verde Experiment Forest Station, on the western slope of El Yunque, Puerto Rico, April-June 1967, in a light trap. J. Maldonado Capriles collector, in the U. S. National Museum, type no. 70543. Paratype, same data, in my collection.

As can be seen from the key the known species fall in three groups: (1) those having the eyes well removed from the pronotum and those with, (2) the calli well or (3) poorly defined among those with the eyes closer to the pronotum. *T. brunnea*, n. sp., is in the latter group close to *T. opaca* Carvalho, a totally different species.

Termatophylidea hyalina, n. sp.

(Figs. 4-8)

Male—as in figure 8; excepting membrane and eyes, somewhat sparsely covered with long fine decumbent whitish or brownish pilosity. Membrane glabrous; eyes with short scarce erect brownish pilosity. Head above, from apex to base very pale yellowish-brown or pale straw-colored; laterally and ventrally brownish. Eyes blackish. Antennae and beak pale straw-colored, as head above. Pronotum with collar, transverse carina before calli, calli, median longitudinal carina from between calli to near posterior margin, and coarse granulations of posterior lobe very pale straw-colored; lower intervening areas brownish. Thorax ventrally and laterally shiny light brown, darker than the pale brownish of dorsum. Mesoscutum barely visible, brownish. Scutellum brownish along median line and yellowish-white on each side. Legs yellowish-white. Hemielytra hyaline, yellowish-white; clavus and apical half of corium with scarce inconspicuous or well defined brownish spots from where arise long brownish hairs; apex of embolium and part of anal ridge brownish; cuneus inconspicuously brown at apex; membrane with an inconspicuous brownish area medianly before apex. Abdomen ventrally uniformly brownish.

Head from apex to collar as long as wide across eyes (13:13); interocular space narrower than width of eye (3:5); eyes separated from collar by about a third of an eye-length (2:7). Antennal segments: 7, 19, 5, 6. Thorax: length 15, width at base 22; length from collar to constriction behind calli 7; length of collar 3.

Head pointed; vertex convex, carinate behind. Eyes relatively large, touching the narrow gula below. Collum very short. Rostrum reaching to between fore and middle coxae. Pronotum clearly divided into anterior and posterior lobes; with posterior lobe coarsely granular; collar smooth, longer than distance from collar to eye (3:2). Calli inconspicuous; each longitudinally divided in two, the outer section narrow, the inner oval, wider. Transverse carina in front of calli well defined; median carina from transverse carina to before apical margin well defined, narrow. Lateral margin shallowly concave; posterior margin concave above each basal angle of scutellum.

Mesoscutum short. Scutellum wider than long (11:7), relatively small, slightly convex and with a few transverse corrugations, without an apical tubercle. Hem-

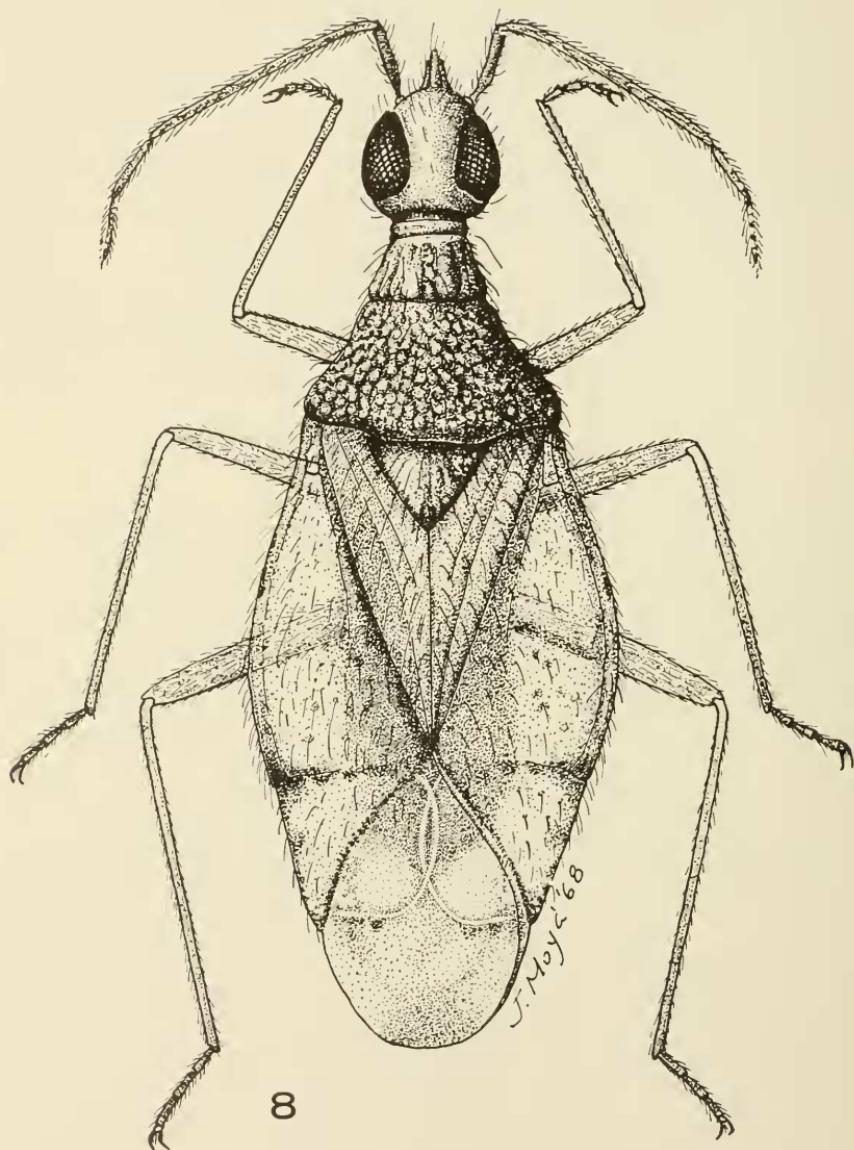
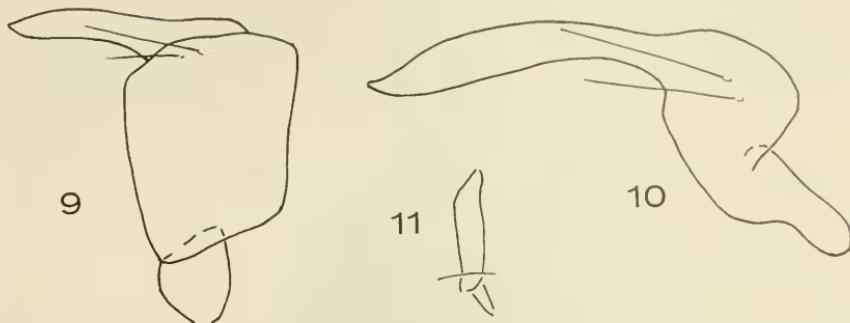


Fig. 8, *Termatophylidea hyalina*, n. sp., ♂.

elytra with claval area internally to claval vein raised, uniformly pilose. Embolium relatively narrow, at midlength narrower than thickness of second antennal segment (2:3); cuneus longer than wide at base (13:9). Overall length 2.7 mm.

Male genitalia as in figs. 4 to 7.



Figs. 9-11, *Termatophylidea constricta*, n. sp., ♂: 9, left clasper, dorsal view; 10, left clasper, lateral view; 11, right clasper, lateral view.

Holotype, male, from Burburata, Estado Carabobo, Venezuela, July 14, 1968, in a New Jersey light trap, J. Maldonado Capriles and Juan Pulido collectors, in the U. S. National Museum, type no. 70544. Paratypes, two males, same data, in my collection.

Close to the next species from which it can be separated by the characters in the key and details of the genitalia.

***Termatophylidea constricta*, n. sp.**
(Figs. 9-12)

Male—as in figure 12; excepting membrane, covered with long fine backwardly inclined whitish hairs. Membrane glabrous; eyes with short scarce erect brownish pilosity. Head above, from apex to base, fading from brown to pale brownish; laterally and ventrally brown. Eyes black. First antennal segment brown, as head anteriorly; last three pale straw-colored, as posterior lobe of pronotum. Beak with first segment brown, second pale brown, and last two straw-colored. Collar same color as base of head; pronotum granular, pale straw-colored; lower intervening areas on anterior lobe and anteriorly on posterior lobe pale brownish. Thorax ventrally and laterally shiny brown. Mesoscutum brownish; scutellum yellowish-white, as granulations of pronotum, narrowly margined by brownish, medially brownish, ending in a sharp black point. Legs pale yellowish-white, lighter than posterior lobe of pronotum. Hemielytra hyaline yellowish-white, paler than posterior lobe of pronotum; clavus with six or seven small brownish spots; corium with several brownish dots on apical half; embolium with apex brownish; anal ridge brownish; cuneus inconspicuously brown at apex; membrane translucent, with a pale brownish tinge bordering outside of areola and a roundish area near apex. Abdomen ventrally uniformly brownish.

Head from apex to collar as long as wide across eyes (14:14); interocular space slightly narrower than width of eye (4:5); eyes separated from collar by less than one-fifth of an eye-length (1.5:7). Antennal segments: 6, 19, 6, 6. Thorax: length 17, width 22; from collar to apex of posterior lobe 7; length of collar 3.

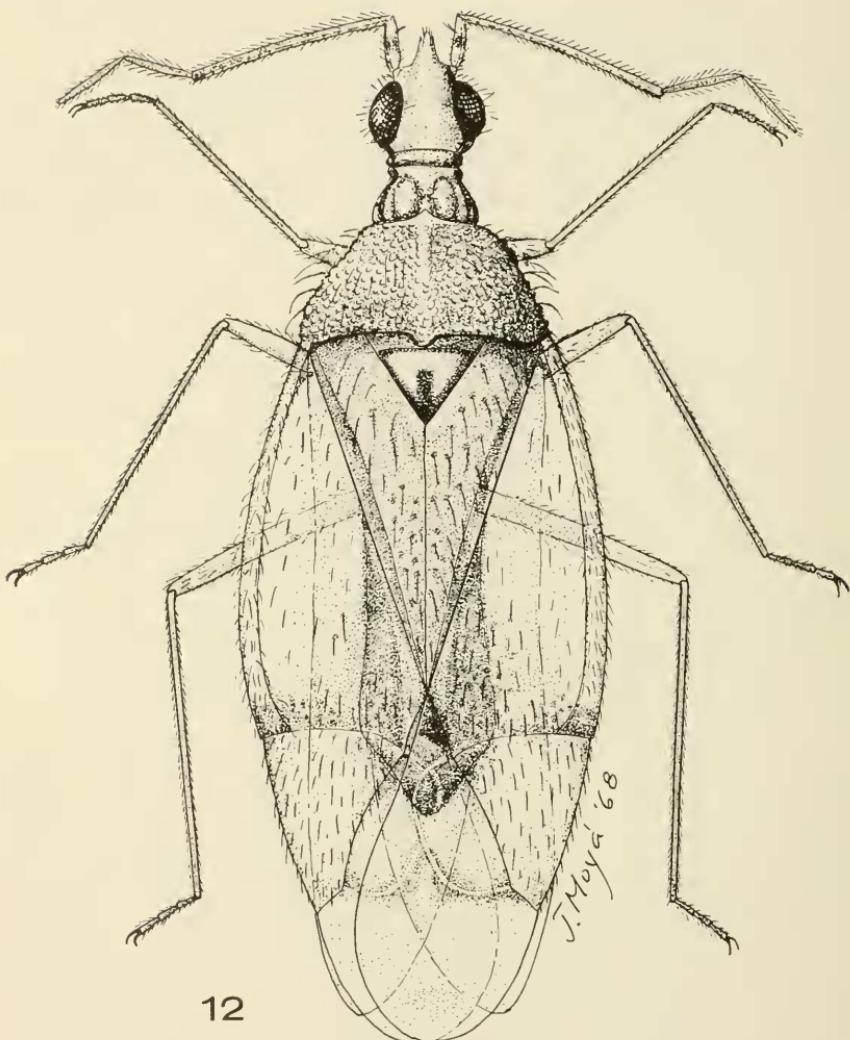


Fig. 12, *Termatophylidea constricta*, n. sp., ♂.

Head pointed; vertex convex. Eyes relatively large; quite close below; gula narrow, just enough to receive the beak. Rostrum reaching to between fore and middle coxae. Collum very short. Collar smooth; transverse carina in front of calli well developed, granular; calli conspicuous, separated by a narrow longitudinal carina; each callus divided by a bracket-shaped depression, the outer section half as wide as the inner, separated from the posterior lobe by a deep oblique depression; posterior lobe coarsely granular; posterior margin concave on each side above each basal angle of scutellum.

Mesoscutum visible in front of concavities of hind margin of pronotum. Scutellum wider than long (10:8), inconspicuously carinate on apical half of median line, without apical tubercle. Hemielytra with claval area internally to claval vein raised, sparsely uniformly pilose. Embolium relatively narrow, at mid-length about as narrow as thickness of second antennal segment (2:2); cuneus longer than wide (14:9). Overall length 3.2 mm.

Male genitalia as in figs. 9 to 11.

Female—coloration and general appearance much as in male. Vertex paler, yellowish-white. Head from apex to collar longer than wide across eyes (14:12), interocular space wider than width of eye (5:3.5). Eyes separated from collar as in male (1.5:7). Antennal segments: 5, 19, 5, 6. Pronotum: length 18, width 25; from collar to apex of posterior lobe 8, length of collar 3. Overall length 3.5 mm.

Holotype, male, from El Limón, near Maracay, Estado Aragua, Venezuela, July 4, 1968, from *Pachyra insignis*, J. Maldonado Capriles collector, in the U. S. National Museum, Cat. No. 70545. Allotype, female, same data, in the USNM. Paratypes, two females, same data, in my collection.

This species is close to *Termatophylidea hyalina*, n. sp., the other Venezuelan species described above. Besides the characters in the key they can be separated by differences in the male genitalia.

KEY TO THE SPECIES OF *Termatophylidea*

1. Distance from eye to collar one-half length of eye; extensive dark brown area on apex of corium 2
- Distance from eye to collar a third or less than length of eye; sparse spots or small brown areas on corium 3
2. Tubercle at apex of scutellum and embolium; a hyaline spot in middle of dark area of corium; cuneus about as long as wide; 4.7 mm.; Costa Rica ***T. ocellata*** Carvalho
- Without such tubercles; without ocellate hyaline spot in dark area of corium; cuneus much longer than broad; 4.2 mm.; Mexico ***T. maculata*** Usinger
3. Apical tubercle of scutellum and embolium dark; hemielytra hyaline, with two brownish spots on corium; 3.8 mm.; Jamaica ***T. pilosa*** Reuter and Poppius
- Without such tubercles; with numerous brownish spots on corium; less than 3.5 mm. in length 4
4. Cuneus as long as wide; hemielytra distinctly rounded laterally; areole with reddish spot; 3.1 mm.; British Guiana ***T. opaca*** Carvalho
- Cuneus longer than wide; hemielytra elongated; areole without reddish spot 5
5. Pronotum barely subdivided into anterior and posterior lobes; calli inconspicuous; brownish species; 3.0 mm.; Puerto Rico ***T. brunnea*, n. sp.**
- Pronotum clearly divided into anterior and posterior lobes; hyaline species 6
6. Hairy, covered with long whitish hairs; pronotum with anterior and posterior lobes less well defined; first antennal segment brownish; 3.2–3.5 mm.; Venezuela ***T. constricta*, n. sp.**
- More sparsely pilose, with long whitish and brownish hairs; pronotum with anterior and posterior lobes strongly defined; first antennal segment pale; 2.7 mm.; Venezuela ***T. hyalina*, n. sp.**

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NOTES ON THE STATUS OF THE GENUS *DEMEIJEREA* KRUSEMANN
(DIPTERA: CHIRONOMIDAE)

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ABSTRACT—Larval and pupal characteristics of *Glyptotendipes* (*D.*) *atrimanus* are described and compared with the type species, *D. rufipes*. These anatomical details when considered with the larva's association with the bryozoan, *Pectinatella magnifica*, suggest a close affinity with *Glyptotendipes* rather than *Endochironomus*. It is proposed that *Demeijerea* be regarded as a subgenus of *Glyptotendipes*.

The purpose of this article is twofold. The placement of *Demeijerea* Krusemann and its current status is discussed. Certain aspects of the natural history and the immature stages of *Glyptotendipes* (*Demeijerea*) *atrimanus* Coquillett are described. The characteristics of the *atrimanus* immature stages are compared with the European species, *Demijerea rufipes* (L.), which is the type of the genus, and these attributes of the immature stages and their bearing on the assignment of *Demeijerea* is outlined.

In 1933, Krusemann erected *Demeijerea* to receive a single species "Chironomus" *rufipes* L. This species had caused previous workers some difficulties in their attempts to assign it to a suitable genus. Goetghebuer (1928) provisionally referred *rufipes* to *Glyptotendipes* Kieffer because the male possessed a 12-segmented antenna. He admitted the placement was doubtful, for the adult lacked the median, longitudinal impressions on the abdominal tergites which are characteristic of *Glyptotendipes*. On the other hand, Edwards (1929) included *rufipes* in the subgenus *Endochironomus* Kieffer on the basis of pronotum shape (bilobed when viewed from above and reaching to the front edge of the scutum), but he admitted that *rufipes* differed from the other species included in *Endochironomus* on the basis of the

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